Just the little things...

Our shop is really a small, two bedroom house that has been reeducated and transformed into an office, tape duplication center, and home for wayward TRS-80s. Its education wasn't thorough, however, so it still acts like a house on occasion. Last week the toilet refused to be quiet. This week the main fuse blew (talk about shutting production down - no, let's not). And the last time the phone rang, Robin almost answered it with 'Donna and Rose answering service'...

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November 1982

Filename	English Translation	PMODE	PCLEAR	Locations
TEXCOV	Textures Cover	3	(4)	7 & 153
MORAINE	Moraine	3	4	25 & 166
LIFE	Life	(2)	(4)	46 & 182
DIGGEM	Diggem	4	5	66 & 199
CRAZMAZE	Crazy Mazes	3	(4)	88 & 215
SMALTEXT	Small Text	4	(4)	105 & 228
GRAFTEXT	Graph Text	4	(4)	124 & 242
PIANO	Piano (CLOADM EXEC)	(2)	(4)	144 & 258

Locations are for the R/S CTR-80. If the first copy of a program won't load, try the second. If neither copy loads, return the tape for disciplining and a prompt replacement. If you get an OM, FC, or SN error while loading or running a program, you probably have to enter the PMODE and PCLEAR values for the program directly from the keyboard. (Values in parenthesis are not set in the program). * These programs may use high speed. Be sure that the computer is slowed down again before doing I/O to tape or disk (POKE 65494,0).

How about a patchwork quilt? **Textures Cover** overlaps blankets of color on the screen to create interesting (guess what?) textures! There are a couple of interesting things in this program: In line 2000 the author clears just 3/4 of the screen by switching to PMODE 1 (PMODE 1 uses 1/4 of the graphic memory that PMODE 3 or 4 uses) and clearing pages 2 to 4 and leaving page 1 (with the Chromasette logo) undisturbed. In line 2010 he turns on the the normal PMODE 3 color set or does a POKE 65314,248 (memory location 65314 is the video control register) to get a different color set (you'll get this color set on occasion when in PMODE 4, but his way is more direct). And in lines 2060 to 2080 he messes with memory location 185 which essentially tricks CoCo into thinking it's in a 64x64 graphics mode. Does this all sound Greek to you? Well, it makes pretty patterns...

Moraine is as cold as ice... A huge chunk of ice is advancing on your car, house, and person. You must fire on the iceblock and hit its fissures to destroy it before it destroys you!

Such is **Life.** Given a certain environment, how would a population of organisms change, grow, stabilize, etc? Quick, get me a computer! And one of the original computer simulations was born. This version has a machine language routine to manipulate the generations quickly, so it is fun to watch as well as educational.

Going in the hole - No, it's not Reaganomics. It's **Diggem**, in which you try to evade two nasties that chase you by digging caves, and you try to cause ground plants to fall on their heads.

Another race-outta-the-maze game. But wait, in **Crazy Mazes** the maze changes as you race. And you thought it was last night's party...

A picture with a thousand words - Mix graphics and text easily with **Small Text** and **Graph Text.** **Graph Text** is similar to **Small Text** except the character set of **Small Text** is much smaller, but at the same time it only uses 1/3 the memory (a needed feature for many applications). Run both programs (they have demos included to show you what can be done), and I will try to explain a few nuances:

First off, the machine language that does all of the magic is hidden after the BASIC portion. So when you are ready to write your own program using the routine, you can delete ALL of the BASIC (ie: DEL 10-1110 in Graph Text) - DO NOT USE NEW. Now if you type LIST, nothing will appear. However, the machine language is still there and you can save it to tape or disk (with CSAVE or SAVE) or add program lines to it as if it was in BASIC.

If you've left the machine code in memory, you can then write your own program and test it immediately. Or you can write your code first, then tack on the machine code (previously saved to tape or disk) by using appending techniques (see December '81 issue) or by using the Append program (May '82). BUT (here it comes) you must have the following lines in your program:

Before calling the routine, you must tell the BASIC program where the machine code is. So at the beginning of the program say:

```
DEFUSR=PEEK(27)*256+PEEK(28)-1874: POKE 359,57
```

The POKE disables the 'Return-to-text-screen' whenever a PRINT statement is encountered in your program. Remember, Graph Text just transfers the characters on the text screen to your graphic screen, and POKE 359,57 makes this invisible to you. So now, whenever you use the SCREEN 1,1 or 0 command, you can't get back to the text screen unless you POKE 359,126 or use SCREEN 0,1 or 0.

Also, before calling the routine, you should set up the graphics screen and the parameters required by the routine:

Use PMODE 3 or PMODE 4.

Set NL=1 up to 16. This is the number of text lines from the BOTTOM of the screen that are to be transferred to the bottom of the graphics screen.

Set FC=0 or FC=1 (for dark-on-light or light-on-dark printing).

Finally, whenever you want the stuff PRINTed on the text screen transferred to the graphic screen, use the following routine:

```
A=USR(FC*256+NL)
```

where A is any variable (its value is irrelevant).

How about a little routine to show how you might write programs to use Graph Text and Small Text? First load Graph Text, then type DEL 10-1110<enter>. Now type in the following lines and run 'em:

```
10 DEFUSR=PEEK(27)*256+PEEK(28)-1874: POKE 359,57
20 PMODE 5-RND(2):PCLS:SCREEN 1,2-RND(2):FC=RND(2)-1: NL=16:
    REM RANDOM GRAPHIC SCREEN SETUPS
30 CLS: FOR I=0 TO 127: POKE 1280+I: NEXT: REM PUT THE ENTIRE
    CHARACTER SET ON THE TEXT SCREEN
35 PRINT @416,"KEY TO CONTINUE": PRINT"<SPACE> FOR TEXT"
40 Q=USR(FC*256+NL): REM TRANSFER TEXT TO GRAPHICS SCREEN
50 A$=INKEY$: IF A$="" THEN 50 ELSE IF A$=" " THEN SCREEN 0,0: GOTO 50
60 GOTO 20
```

Note: If you hit the <break> key while running one of the demos, it appears that nothing happens because the text screen is disabled. So have faith that you did break out of the program, type POKE 359,126<enter> very carefully (it won't show on the screen) and you should get back to the normal mode.

Author's note: You can get double-width characters on the PMODE 4 screen by drawing your graphic in PMODE 4, call PMODE 3, PRINT your text, and call the USR program (don't call the SCREEN command inbetween this process).

Time to relax with a little Piano playing. You can play single notes or repeat notes by holding the <shift> key down. To load in the CoCo keyboard, type CLOADM"PIANO"<enter>. Once it is loaded, type EXEC<enter> to play. To save a copy to tape, type CSAVEM"PIANO",3584,4742,4349<enter> (use SAVEM to save to disk).

E00,1286,10FD

Three's a crowd...

I left a '3' out of the addresses for last month's PONG, and that left a lot of you hanging. To save a copy to tape, type:

CSAVEM"PONG",&H3000,&H349C,&H3400 (use SAVEM to save to disk).

It's a bit chilly...

A few of you mentioned that an EXEC &H8000 (to the start of Extended BASIC) will reset the PMODE and PCLEAR to cold-start values (rather than turning CoCo off and then on again). Warning: It will not reset the previously CLEARed values, however.

Space reversal...

R.W. Odlin of Sedro-Wooley, Washington noted that the direction keys for last month's Astromines auto-repeat if the <up-arrow> is held down. Also, he sent this mod to allow the ship to go backwards (for his sons', as he put it, "less than honorable" purposes):

```
435 IF PEEK(342)=&HF7 THEN Y=Y+20
495 IF Y>180 THEN Y=20
```

The disk speaks...

I like guys like Eldon Doucet. He thought it was a challenge to make last month's Say & Play work on disk. So he took it on and fixed it! First, power up your disk system. Then CLOAD in Say & Play (WITHOUT changing PCLEAR values). Finally, change the following old values to the new values in the specified lines and save the modified version to disk:

Line No.	Old Val	to	New Val
20 & 120	&H3D00		&H5700
240	&H3D02		&H5702
	&H18		&H32
	&H3D5A		&H575A
	&H1C		&H36
310	&H3D02		&H5702
	&H1C		&H36
	&H3D5A		&H575A
	&H22		&H3C
370	&H3D02		&H5702
	&H22		&H3C
	&H3D5A		&H575A
	&H29		&H43

Line No.	Old Val	to	New Val
470	&H3D02		&H5702
	&H30		&H4A
	&H3D5A		&H575A
	&H35		&H4F
520	&H3D02		&H5702
	&H35		&H4F
	&H3D5A		&H575A
	&H3A		&H54
610 & 810	&H3D02		&H5702
	&H29		&H43
	&H3D5A		&H575A
	&H30		&H4A

The disk shouts...

Guys like Bob Moister please me even more! I spent quite a while trying to get August 1982's Realm of Nauga to run on disk. But the modifications were soooo extensive that I had to quit. However, Bob didn't give up and he (what a nice guy - yippee!) will send a modified listing of the program to anyone who sends him a stamped (37 cents - it's a big listing), self-addressed LARGE (manilla?) envelope. That's Bob Moister, 799 W. Snowden Circle, Memphis, TN 38104.

Like cockroaches...

February 1982's Disassembler may never be bug free... Can't I just pretend that it will go away? Roy Seffens of Chicago, Illinois noted that the IF M= in lines 310 and 320 should read IF MS=.

Usin' Raid,

Dave

ed.

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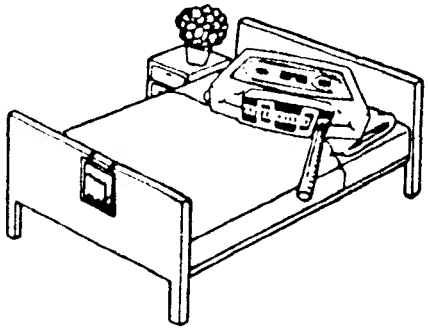

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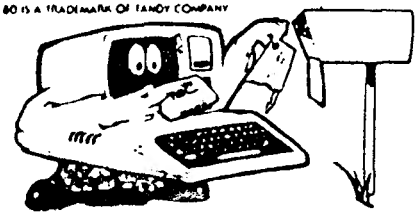

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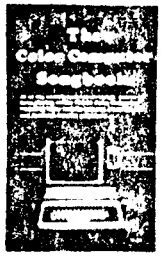

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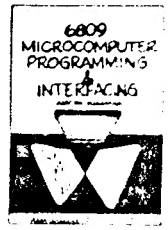

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